AUTHOR INDEX

Abegaz, B. M., 915
Aburjai, T. A., 407
Adair, A., 183
Aga, Y., 959
Ahmad, V. U., 933
Alavez-Solano, D., 953
Alécio, A. C., 621
Ali, Z., 933
Amaral, M. C. E., 755
Anantachoke, C., 833
Andrei, C. C., 799
Anjaneyulu, A. S. R., 891
Araújo, A. R., 597, 741
Argandoña, V., 217
Arruda, A. C., 779
Arruda, M. S. P., 779
Asada, Y., 323, 447
Asakawa, T., 247
Asakawa, Y., 131
Ashida, Y., 197, 297
Athayde, M. L., 853
Azambuja, P., 611

Back, T. G., 121
Bailleul, F., 439
Barata, L. E. S., 589
Barreiros, A. L. B. S., 805
Barroso, J. G., 241
Bayma, J. de C., 779
Beattie, K. A., 383
Ben-Arie, R., 191
Berry, Y., 403
Bethelmie, F., 11
Beutler, J. A., 233
Bhat, A., 59
Birch, A. N. E., 111
Bisrat, D., 949
Bittrich, V., 755
Blake, P. S., 887
Blázquez, M. A., 397
Blitzke, T., 979
Bloor, S. J., 327
Boase, M. R., 327
Bode, H., 311
Boira, H., 397
Bolzani, V. da S., 741
Boralle, N., 823
Borin, M. R. de M. B., 559
Borquez, J., 863
Borsato, M. L. C., 809
Boyd, M. R., 233
Braddock, J. F., 29
Braz-Filho, R., 793, 799
Bremner, J. B., 403
Brett, C. T., 103
Brito, R. G. L., 815
Brito, T. de B. M., 679
Brochini, C. B., 727
Buckeridge, M. S., 581
Bueno, O. C., 837
Bülow, N., 141
Burton, G., 769

Cabral, M. M. O., 611
Çalis, I., 941
Canto, W. C., 779
Carneiro, F. J. C., 823
Cascon, V., 773
Castellano, E. E., 733
Castro C., O., 837
Cavalheiro, A. J., 621
Chang, C.-J., 227
Chang, S.-T., 227
Chaves, A. L., 389
Chavez-Uribe, I., 953
Chávez, I., 51
Ciccioli, P., 983
Claros, B. M. G., 859
Clausen, T. P., 29
Codd, G. A., 383
Coelho, G. C., 853
Cometa, M. F., 411
Conserva, L. M., 815
Cordell, G. A., 463
Corsino, J., 741
Cortez, D. A. G., 711
Costa, M. A., 537
Crisp, C. M., 887
Croft, S. L., 589
Cueto, M., 223

da Silva Bolzani, V., 597, 621
da Silva, A. J. R., 859
da Silva, M. F. das G. F., 643, 711, 837
Dagne, E., 949
Dampawan, P., 183
David, J. M., 805
David, J. P., 805
Davin, L. B., 537
de Brito, A. P. P., 859
de Carvalho, M. G., 799
de Carvalho, P. R. F., 741
De Kimpe, N., 363
de la Fuente, J. R., 769
De Luca, V., 531
de Moraes, L. A. B., 799
de Oliveira, C. M. A., 755
de Oliveira, F. F., 683
De Oliveira, F. M., 815
de Oliveira, M. da C. F., 847
de Queiroz, L. P., 805
De-Eknamkul, W., 177
Deans, S. G., 241
del Carmen Herrera, M., 363
DellaGreca, M., 909
Delle Monache, F., 411, 679, 819
Demyttenaere, J. C. R., 363
Dolata, M., 429
Dongo, E., 915
Dörr, M., 965
dos Santos, H. S., 793
Dourtoglou, V., 203
Dudai, N., 375
Dunbar, D. C., 19
Dyatmiko, W., 603

PII: S0031-9422(01)00012-7

Diaz, E., 51

El Sayed, K. A., 19
El-Mousallamy, A. M. D., 927
Elsworth, C., 23
Esumi, Y., 975

Faccione, M., 799
Farnsworth, N. R., 35
Favier, L. S., 721
Federici, E., 411
Fenical, W., 223
Fernandes, J. B., 643
Fernandes, J. B., 711, 837
Ferreira, A. G., 711
Ferreira, A. J. S., 575
Ferreira, D., 43
Ferreira, D. T., 799
Ferreira, F., 217
Ferri, P. H., 589
Fettinger, J. C., 663
Figueiredo, A. C., 241
Fiorentino, A., 909
Fischer, N. H., 653
Floh, E. I. S., 575
Fonseca, F. N., 575
Foo, L. Y., 67, 263
França, S. C., 741
Franzyk, H., 337
Frattoni, M., 983
Fronczek, F. R., 653
Frueauf, J. B., 429
Fujii, Y., 131
Fujioka, S., 97
Fukui, Y., 937
Fukuyama, Y., 247, 883
Furlan, M., 621, 741

Galeffi, C., 411
Gamberini, M. T., 617
Garcez, F. R., 733
Garcez, W. S., 733
Garcia, B., 903
Garcia, E. S., 611
Gaskin, P., 317
Georgiadou, E., 903
Giesbrecht, A. M., 597
Gilbert, B., 773
Gill, M., 23
Giordano, O. S., 721
Goad, L. J., 197
Göbel, E., 337
Gómez-Garibay, F., 953
Gonzales, M., 429
Gonzalez, M. J., 833
Gordon, S. C., 111
Gottlieb, H. E., 749
Gottlieb, O. R., 559, 611
Gottsberger, G., 551
Gould, K. S., 327
Grael, C. F. F., 809
Griffiths, D. W., 111
Guilhon, G. M. S. P., 815
Guimarães, E. F., 783
Günther, W., 987
Güntner, C., 217
Guo, S., 419

Habermehl, G. G., 359
Halim, A. F., 19
Handro, W., 575
Harada, J., 131
Haraguchi, M., 715
Harborne, J. B., 481
Harms, R., 305
Hartmann, T., 305
Hashimoto, K., 237
Hashimoto, T., 247
Hassanean, H. A., 353
Hatano, T., 513, 959
Hawas, U. W., 927
Hayashi, K., 1
Hebling, M. J. A., 837
Hedden, P., 317
Heilmann, J., 941
Herbert, K., 233
Herz, W., 833
Heydenreich, M., 457
Hinkley, S. F., 663
Hirai, N., 131
Hirata, T., 197, 297
Hostettmann, K., 603
Huang, J.-M., 883
Hussein, S. A. M., 927

Imai, M., 879
Inoguchi, M., 1
Inoue, T., 131
Irita, H., 247
Isidori, M., 909
Ito, H., 959
Ito, Y., 873
Itokawa, H., 715
Iwashina, T., 971

Jahangir, M., 359
Jamie, J. F., 403
Janzen, L., 121
Jarvis, B. B., 663
Jensen, P. R., 223
Jensen, S. R., 337
Jetter, R., 169
Jiménez-Estrada, M., 51, 953
Johnson, T., 233
Jürgens, A., 551

Kakuda, R., 879
Kamel, M. S., 353
Kan, Y., 937
Kapche, G. W. F., 915
Kaplan, M. A. C., 749, 783
Kasai, R., 353
Kato, M. J., 575, 621, 741, 843
Kaya, K., 383
Kenne, L., 419
Kennedy, J. A., 77
Kieliszewski, M. J., 429
Kijjoa, A., 833
Kikuchi, M., 879
Kinghorn, A. D., 35
Kirtikara, K., 349
Kitajima, J., 971
Kittakoop, P., 349
Klaiber, I., 255
Kobayashi, M., 317
Koike, A., 937
Kondo, H., 1
König, W. A., 141
Koshioka, M., 937
Kouam, S. F., 915
Koussissi, E., 203

Krebs, H. C., 359
Kuo, Y.-H., 227
Kutchan, T. M., 177

Lago, J. H. G., 727
Lam, Y.-F., 663
Lancaster, J. E., 127
Lang, G., 965
Lapa, A. J., 617
Larkov, O., 375
Latorre, L. R., 741, 843
Lazari, D., 903
Leitão, G. G., 679, 859
Lemos, T. L. G., 793
Lerner, H. R., 375
Lewinsohn, E., 375
Lewis, N. G., 11, 537
Leykam, J. F., 429
Li, W., 323, 447
Liebermann, B., 987
Lima-Landman, M. T., 617
Lindsay, E. A., 403
Lloyd, E. A., 429
Lokvam, J., 29
Lopes, D., 749
Lopes, L. M. X., 823
Lopes, N. P., 575, 809
Loyola, L. A., 863
Lu, Y., 67, 263
Luciano, C., 819
Luo, X.-D., 867
Lurie, S., 191

Ma, Y.-B., 867
Machado, S. M. F., 755
Machida, K., 879
MacMillan, J., 317
Magalhães, A. F., 787
Magalhães, E. G., 787
Mander, L. N., 887
Marais, C., 43
Markham, K. R., 327
Marques, V. L. L., 815
Marques, W. B., 793
Marsaioli, A. J., 755
Marston, A., 603
Martins, R. C. C., 843
Martinez Valderrama, J. C., 505
Masaoud, M., 979
Matthews, M. A., 77
Matthiensen, A., 383
Mayer, A. M., 375
Mayer, J. E., 389
Mayworm, M. A. S., 581
Mazzafera, P., 285
Mazzola, E. P., 663
McAleer, J. P., 11
McCall, K. L., 233
McChesney, J. D., 19
McNabb, W. C., 67
Meier, B., 941
Midiwo, J. O., 457
Mimaki, Y., 715
Mitchell, K. A., 327
Mizuki, K., 873
Mohamed, K. M., 353
Molan, A. L., 67
Monaco, P., 909
Morales, G., 863
Moreira, D. de L., 783
Mori, H., 197
Morita, H., 715
Mors, W. B., 627
Motidome, M., 715
Moyna, P., 217
Mukherjee, R., 35
Müller, A. H., 779
Murphy, J. P., 11

Nagakura, N., 275
Nagem, T. J., 683
Nair, M. G., 389
Nakata, M., 237
Nakayama, M., 937
Nascimento, M. C. do 627
Navarro, H., 35
Navickiene, H. M. D., 621
Ngadjui, B. T., 915
Noguchi, T., 97
Nogueira, M. A., 787
Nohara, T., 873
Nozaki, H., 1
Nussbaum, R.-P., 987

Ober, D., 305
Ohigashi, H., 131
Ohtani, K., 353
Okuda, T., 513, 959
Oliva, G., 643
Oliveira, O. M. M. F., 741
Olsen, C. E., 337
Ono, M., 873
Owen, D. J., 887

Padrón, J. I 721
Pagnocca, F. C., 837
Paine, A., 589
Palazzino, G., 411
Palmery, M., 411
Panagouleas, C., 903
Paolocci, F., 983
Papile, J., 11
Parida 275
Passador, E. A. P., 643
Pauletti, P. M., 597
Pedras, M. S. C., 213
Pedro, L. G., 241
Pereira, A. M. S., 741
Pereira, N. A., 627
Pereira, S. I., 241
Peres, V., 683
Pérez, I., 397
Pessoa, O. D. L., 793
Peter, M. G., 457
Pharis, R. P., 121
Phillipson, J. D., 589
Phinney, B., 317
Pietr, S. J., 975
Pinto, M. M. M., 833
Pirani, J. R., 643
Pizzolatti, M. G., 819
Porto, A. L. M., 755
Porzel, A., 979
Premasthira, C., 131
Proctor, J., 537
Pugialli, H. R. L., 749
Pupo, M. T., 643
Putievsky, E., 375

Queiroz, S. C. N., 787

Ramanarayan, K., 59
Rao, I. M., 389

Rao, K. S., 59
Rao, V. L., 891
Ravid, U., 375
Reeb, S., 255
Reichardt, P. B., 29
Reyes-Chilpa, R., 953
Reyes-Chipa, R., 51
Robertson, G. W., 111
Robinson, S. P., 285
Rodríguez-Gamboa, T., 837
Rodrigues Fo, E., 643, 837
Rønsted, N., 337
Roque, N. F., 617, 727, 733
Rossomando, P. C., 721
Rubluo, A., 51
Rukachaisirikul, V., 183
Ruppelt Pereira, B. M., 627

Saad, I., 51
Saikawa, Y., 237
Sakai, T., 275
Sakashita, S., 131
Salatino, A., 581
Salatino, M. L. F., 567
Saleem, M., 933
Salgueiro, L. R., 241
Sano, T., 131
Santos, D. Y. A. C., 567
Santos, L. S., 589
Santos, P. A. G., 241
Sartorelli, P., 575, 843
Sashida, Y., 715
Saubern, S., 23
Sawamura, H., 873
Schanzenbach, D., 457
Schaub, G. A., 611
Scheffer, J. J. C., 241
Schenkel, E. P., 853
Schmidt, J., 979
Seidel, V., 439
Sekimoto, M., 97
Seo, E.-K., 35
Shaiq Ali, M., 359, 933
Shaw, M. L., 127
Shepherd, T., 111
Shiah, S.-G., 227
Shimoda, K., 297
Shintaku, M., 275
Shintani, Y., 959
Shoemaker, R. H., 233
Shripathi, V., 59
Sierra, P., 863
Silva, A. M. S., 833
Silva, D. H. S., 823
Silveira, E. R., 847
Simirgiotis, M. J., 721
Simmen, U., 941
Skaltsa, H., 903
Skelton, B. W., 675
Smith, A. C., 103
Soares, S. S. V., 679
Sokovic, M., 903
Song, Q., 653
Sosa, V. E., 769
Souccar, C., 617
Soulé, S., 217
Sousa-Sánchez, M., 953
Souza, G. E. P., 809
Spray, C. R., 317
Spring, O., 255
St-Pierre, B., 531
Steenkamp, J. A., 43
Stevens, J. F., 965
Sticher, O., 941
Strack, D., 11, 87
Sultana, N., 675
Sun, Y., 67
Suttipanta, N., 177
Suzuki, Y., 975
Swamy, G. S., 59

Taha, A. A., 921
Takahashi, H., 883
Takatsuto, S., 97
Takenaka, Y., 275
Takeya, K., 715
Tamura, Y., 297
Tanahashi, T., 275
Tanticharoen, M., 349
Taylor, D. R., 887
Taylor, W. C., 183
Thebtaranonth, Y., 349
Tirillini, B., 983
Tomazela, D. M., 643
Tonn, C. E., 721
Torres, L. M. B., 617
Tozzi, A. M. A., 787
Tramontano, W. A., 11
Treyvaud, V., 603
Turner, P. C., 183

Uglialoro, A., 11
Uriburu, M. L., 769
Uzair, S. S., 359

van Heerden, F. R., 117
van Rensburg, W. J., 43
van Wyk, B.-E., 117
van Wyk, B.-E., 949
VandenBosch, K., 429
Vasconcellos, M. L. A. A., 859
Vázquez-Flota, F. A., 531
Vázquez, A., 217
Vázquez, J. T., 721
Verdelli, G., 983
Victor, S. R., 837
Vieira, P. C., 643, 711, 837
Viljoen, A., 949
Viljoen, A. M., 117
Vogler, B., 255

Waldron, K. W., 103
Wall, M. E., 35
Walton, E. F., 127
Walton, N. J., 461
Wang, D. S.-Y., 227
Wani, M. C., 35
Watanabe, T., 237
Waterhouse, A. L., 77
Waterman, P. G., 269, 439, 675
Wattanapiromsakul, C., 269
Webber, A. C., 551
Wehde, R., 965
Wende, G., 103
Weniger, J., 11
Wenzl, P., 389
White, A. H., 675
Williams, C. A., 481
Winefield, C. S., 327
Wirz, A., 941
Wollenweber, E., 965
Woodford, J. A. T., 111
Wu, C.-L., 227

Wu, D.-G., 867
Wu, S.-H., 867

Xia, Z.-Q., 537

Yamaguchi, M., 937
Yamasaki, K., 353
Yang, C.-S., 883
Yaoita, Y., 879
Yenesew, A., 457
Yokobatake, N., 297
Yokosuka, A., 715
Yoshida, H., 937
Yoshida, S., 97
Yoshida, T., 513, 959
Yoshikawa, T., 323, 447
Yoshinaga, D., 197
Young, M. C. M., 597, 621
Yunes, J. S., 383

Zaghloul, A. M., 19
Zaharia, I. L., 213
Zarnowski, R., 975
Zarrelli, A., 909
Zeeck, A., 311
Zhou, H.-W., 191
Zipper, R., 255
Zukerman-Schpector, J., 733

SUBJECT INDEX

A
Acetylenes, from *Psathyrella* 921
Alangiaceae 177
Alangium lamarckii, deacetyllipecoside synthase from 177
Algae 975
Alkaloids,
  from *Veratrum*, transformation of by *Cunninghamella* 19
  piperidine, from *Aloe* 979
Alkanediols, long-chain, from *Myricaria* leaf waxes 55
5-*n*-Alkylresorcinols, from *Apatococcus* 975
Alliinase levels, in *Leucocoryne* 127
Allylic alcohol dehydrogenase, from *Nicotiana* cultured cells 297
Aloe, chromones and anthrones from 949
A. castanea, chromone ester from 117
A. sabaea, chlorinated amide and piperidine alkaloids from 979
Alternaria alternata, bicycloalternarenes from 987
Amides,
  antifungal, from *Piper* 621
  chlorinated, from *Aloe* 979
1-Aminocyclopropane-1-carboxylic acid oxidase, from apples, inhibition of 203
Angiospermae, modelling of, as networks of biodiversity 559
Annonaceae 439, 551, 567
  distribution of flavonoids in 567
  floral scents of beetle- and thrip-pollinated species of 551
Anthocyanic vacuolar inclusions, significance of in flower coloration 327
Anthocyanins, malyl, cyclic, from *Dianthus* 937
Anthracenes, from *Auxemma* 793
Anthraquinones, tetrahydro-, biosynthesis of in fungi 23
Anthrone *C,O*-diglycoside, from *Picramnia* 837
Anthrones, from *Aloe* 949
Apatococcus constipatus, 5-*n*-alkylresorcinols from 975
Aphid-repellent glycoside, from *Solanum* 217
Apocynaceae 97, 403, 531
Aquifoliaceae 853
Arabidopsis thaliana, metabolism of castasterone in seedlings of 97
Araucaria angustifolia, phenylpropanoids and biflavones in 575
Araucariaceae 575
Aristolochia ridicula, bi-and tetraflavonoids from 823
Aristolochiaceae 823, 971
Aroma characterisation, of *Leucocoryne* 127
Aromatics, from *Zataria* 933
Asarum canadense, chalcone and flavonol glycosides from 971
Aspalathus linearis, flavanone *C*-glycosides from 43
Aspergillus niger, biotransformation of geraniol, nerol and citral by 363
Asphodelaceae 117, 949, 979
Asteraceae 51, 141, 255, 305, 617, 721, 769, 809, 863, 903
Atranones, from *Stachybotrys* 663
Auxemma oncocalyx, anthracenes from 793

B
Baccharis trimera, diterpenoid from, with relaxant effect on vascular smooth muscle 617
Bauhinia malabarica, antimalarial bibenzyls from 349
Benzocoumarin, cytotoxic, from *Vismia* 35
Benzophenones,
  cytotoxic, form *Vismia* 35
  polyisoprenylated, from *Clusia* 29, 755
Benzylbenzoate diglucosides, from *Curculigo* 411
Berberidaceae 537
Beta vulgaris, tissue-specific developmental changes in cell-wall ferulate in 103
Bibenzyls, antimalarial, from *Bauhinia* 349
Bicycloalternarenes, from *Alternaria* 987
Biflavones, in *Araucaria*, at different stages of development 575
Biflavonoids, from *Aristolochia* 823
Bignoniaceae 359
Bioactive plant products,
  allelopathic sulphur compounds and secoiridoids, from *Sphenoclea* 131
  antialgal diterpenes, from *Ruppia* 909
  antibacterial
    eudesmanes, from *Carissa* 403
    nor-lignans, from *Styrax* leaves 597
    polyisoprenylated benzophenones, from *Clusia* 29
  antifungal
    amides, from *Piper* 621
    flavanone, from *Lonchocarpus* roots 953
    nor-lignans, from *Styrax* leaves 597
    monoterpene production, in elicited cell suspension cultures of *Piqueria* 51
    sesquiterpene lactones, from *Centaurea* 903
  antileishmanial neolignans, from *Virola* 589
  antimalarial preracemosols A and B, from *Bauhinia* 349
  anti-platelet aggregation active stilbenes, from aerial parts of *Rheum* 407
  aphid-repellent spirostane saponin, from *Solanum* 217
  bioactive lignoids, effect of on *Rhodnius* 611
  CRH-1 receptor binding inhibitory bisanthraquinone glycosides, from *Hypericum* 941
  cytotoxic
    benzophenones and benzocoumarins, from *Vismia* 35
    clerodane diterpene esters, from *Lactia* 233
    cyclic depsipeptide, from marine *Fusarium* 223
    diterpenoids, from *Haplopappus* 863
    lignan and sesquiterpenoids, from *Taiwania* 227
  DNA strand-scission active benzophenone, from *Vismia* 35
  glycosomal glyceraldehyde-3-phosphate dehydrogenase-inhibitory flavonoids, from *Neoraputia* 643
  hepatotoxic [D-Leu^1]microcystin-LR, from *Microcystis* cyanobacterium 383
  micromolecules from plants, active against snake bite 627
  molluscicidal saponins, from *Phytolacca* 603
  muscle-relaxant diterpene, from *Baccharis* 617
  phytoalexins, from *Sinapis*, elicitation, isolation and synthesis of 213
  plant growth regulating activity, of castasterone analogues 121
  vascular active norlignan glucoside, from *Curculigo* 411
Biodiversity, and drug discovery 463
Biological activities, of flavonoids 481
Biosynthesis,
  of dimethylallyl moiety of glabrol, in *Glycyrrhiza* hairy root cultures 323
  of gibberellins, in rice seedlings 317
  of 28-norcastasterone, in *Arabidopsis* and other plants 97
  of podophyllotoxin, in *Linum* and *Podophyllum*, dirigent-mediated 537
  of sesquiterpenes, role of germacrene D as precursor of 141
  of spirobisnaphthalenes, in fungi 311
  of tetrahydroanthraquinones, in fungi 23
  of triterpenoids, in *Maytenus* and *Salacia*, compartmentalization of 741
  of vindoline, in *Catharanthus*, light activation of 531

PII: S0031-9422(01)00011-5

Biotransformation,
of citral, by sporulated surface cultures of *Aspergillus* and *Penicillium* 363
of essential oil constituents, by germinating wheat seed 375
of geraniol, by sporulated surface cultures of *Aspergillus* and *Penicillium* 363
of jervine, by *Cunninghamella* 19
of nerol, by sporulated surface cultures of *Aspergillus* and *Penicillium* 363
Bisanthraquinone glycosides, biologically active, from *Hypericum* 941
Boraginaceae 793
Brachiaria, accumulation of 1,3-di-*O*-*trans*-feruloylquinic acid in 389
Brassicaceae 97, 213
Brassinosteroids,
biosynthetic intermediates of 97
synthesis and bioactivity of 121
Bredemeyera brevifolia, pentaoxygenated xanthones and fatty acids from 847
Butanolide, from *Mollinedia* 859

C
Caffeate ester of 3,4-dihydroxy-β-phenylethanol, from *Teucrium* 927
Caffeine, from *Ilex* epicuticular wax 853
Caffeoyl phenylethanoid glycosides, in *Plantago* species 337
Calophyllum teysmannii, xanthones from 833
Caprifoliaceae 879
Carissa lanceolata, antibacterial eudesmanes from 403
Caryophyllaceae 327, 937
Castasterone,
as biosynthetic origin of 28-norcastasterone 97
6α- and 6β-hydroxy analogues of, synthesis and bioactivity of 121
Catharanthus roseus, light activation of vindoline biosynthesis in 531
Celastraceae 741
Centaurea, antifungal sesquiterpene lactones from 903
Cestrum sendtnerianum, steroidal saponins from 715
Chalcones, pyrano-, enzyme inhibitory, from *Neoraputia* 643
Chemotaxonomic studies,
of biflavones, in *Araucaria*, at different stages of development 575
of caffeoyl phenylethanoid glycosides, in *Plantago* 337
of 6′-*O*-coumaroylaloesin, in *Aloe* section *Anguialoe* 117
of essential oils,
in populations of *Thymus caespititius* 241
in species of *Teucrium pumilum* aggregate 397
of flavonoids,
in Annonaceae 567
in Myristicaceae 505
of iridoid glucosides, in *Plantago* 337
of phenylpropanoids, in *Araucaria*, at different stages of development 575
of polysaccharides, in seed cell walls of Vochysiaceae 581
of sesquiterpene lactones, in *Viguiera* 255
Chenopodiaceae 59, 103
Chlorociboria, absolute configuration of extended quinone from 237
Chromene, from *Paramignya* stems 269
Chromone ester, as taxonomic marker for *Aloe* section *Anguialoe* 117
Chromones, from *Aloe* 949
Cipadessa baccifera, tetranortriterpenoids, sterols and heneicosenes from 867
Citral, biotransformation of by *Aspergillus* and *Penicillium* 363
Clusia, polyisoprenylated benzophenones from 755
C. grandiflora, antibacterial polyisoprenylated benzophenones from 29
Clusiaceae 29, 35, 183, 755, 815, 833, 941
Coffea arabica, polyphenol oxidase from leaves and fruit endosperm of 285
Copaifera, composition of oleoresins in 773
Crataegus monogyna, epicuticular wax composition in flowers of 111
Cunninghamella elegans, transformation of jervine by 19
Curculigo pilosa, benzylbenzoate and norlignan glucosides from 411
Cyanobacteria 383

D
Deacetyllipecoside synthase, from *Alangium* 177
Depsipeptide, cyclic, cytotoxic, from marine *Fusarium* 223
Dermocybe splendida, biosynthesis of tetrahydroanthraquinones in 23
Dianthus caryophyllus,
anthocyanic vacuolar inclusions in flowers of 327
cyclic malyl anthocyanins from 937
Dichloroanisoles, from *Psathyrella* 921
Dichromenoxanthones, from *Tovomita* 815
1,3-Di-*O*-*trans*-feruloylquininc acid, from nutrient-deprived *Brachiaria* roots 389
Dihydrochalcone, dimeric, from *Goniothalamus* 439
Dioclea lasiophylla, antioxidant A-type proanthocyanidin from 805
Diterpene esters, clerodane, cytotoxic, from *Laetia* 233
Diterpenoids,
cytotoxic, from *Haplopappus* 863
from *Baccharis*, having relaxant effect on vascular smooth muscle 617
from *Excoecaria* 891
from *Laennecia* 721
from toxigenic mould *Stachybotrys* 663
from *Vitex* fruits 873
ent-labdane, antialgal, from *Ruppia* 909
Dorstenia mannii, prenylated flavonoids from 915

E
Erythrina sacleuxii, isoflavanones from stem bark of 457
Essential oils,
biotransformation of by germinating wheat seed 375
chemotaxonomic value of in *Teucrium pumilum* aggregate 397
from *Thymus* populations, chemical polymorphism of 241
Ethylene inhibitors, acting on 1-aminocyclopropane-1-carboxylic acid oxidase 203
Euphorbiaceae 891
Eustoma grandiflorum, anthocyanic vacuolar inclusions in flowers of 327
Excoecaria agallocha, diterpenoids from 891

F
Fabaceae 11, 43, 67, 323, 349, 429, 447, 457, 773, 787, 799, 805, 953, 959
Fatty acids, from *Bredemeyera* 847
Ferulate, in sugar beet cell-wall, tissue-specific developmental changes in 103
Flacourtiaceae 233
Flavanone *C*-glycosides, from fermented rooibos 43
Flavanones,
antifungal, from *Lonchocarpus* 953
prenylated,
biosynthesis of in hairy root cultures of *Glycyrrhiza* 323
from *Paramignya* stems 269
Flavone glycosides, from *Onobrychis* 67
Flavonoid
dimers and tetramer, from *Aristolochia* 823
glycosides,
from *Asarum* 971
from *Salvia* 263
research, advances in 481
Flavonoids,
distribution of in Annonaceae 567
distribution of in Myristicaceae 505
enzyme inhibitory, from *Neoraputia* 643
from *Goniothalamus* 439
from *Glycyrrhiza* hairy root cultures 447
from *Lonchocarpus* roots 787
C-glucosyl, from *Piper* leaves 783
C-methyl, from Myrtaceae leaf waxes 965
C-prenyl, from *Tephrosia* roots 799
prenylated, from *Dorstenia* 915
Flavonol glycosides, from *Siparuna* 679

Floral volatiles, from beetle- and thrip-pollinated Amazonian Annonaceae 551
Fragaria × *ananassa*, endogenous gibberellins from 887
Fraxinus americana, secoiridoid glucosides from 275
Friedolanostanes, from *Garcinia* pericarp 183
Fungi 19, 23, 223, 237, 311, 363, 663, 921, 983, 987
Furanocoumarin, from *Halfordia* 675
Fusarium, cytotoxic cyclic depsipeptide from 223

G
Garcinia hombroniana, lanostanes and friedolanostanes from 183
Gentianaceae 327
Geraniol, biotransformation of by *Aspergillus* and *Penicillium* 363
Germacrene D, role of as a precursor in sesquiterpene biosynthesis 141
Gibberellin biosynthesis, in rice seedlings 317
Gibberellins, endogenous, from strawberry 887
Gibbestatin B, inhibition of gibberellin A3-induced expression of α-amylase by 1
Glabrol, biosynthesis of prenyl group of, in hairy root cultures of *Glycyrrhiza* 323
Glycyrrhiza glabra,
biosynthesis of prenyl group of glabrol in hairy root cultures of 323
flavonoids from hairy root cultures of 447
G. uralensis, isoflavonoids and flavonoids from 959
Goniothalamus, dimeric dihydrochalcone and other flavonoids from 439
Guarea macrophylla, terpenes from 727

H
Halfordia kendack, furanocoumarin from 675
Haplopappus rigidus, cytotoxic diterpenoids from 863
Heneicosenes, from *Cipadessa* 867
Hepaticae 197, 247
Herbertus sakuraii, herbertane sesquiterpenoids from 247
Hippocrateaceae 741
Histone deacetylase inhibitors, ability of to alter cell proliferation 11
Homospermidine synthase, from *Senecio*, cloning and expression of 305
Hordeum vulgare, inhibition of gibberellin A3-induced expression of α-amylase in by gibbestatin B 1
Hydrocinnamic acid glycosides, from *Onobrychis* 67
Hypericum perforatum, biologically active bisanthraquinone glycosides from 941
Hypoxidaceae 411

I
Ilex paraguariensis, caffeine and theobromine from epicuticular wax of 853
Illiciaceae 883
Illicium merrillianum, *seco*-prezizaane sesquiterpenes from 883
Iridoid glycosides,
from *Phlomis* 353
from *Plantago* species 327
from *Pseudocalymma* 359
Isoflavanones, from *Erythrina* stem bark 457
Isoflavonoids, from *Glycyrrhiza* 959

J
Jervine, transformation of by *Cunninghamella* 19

K
Kaplanin, from *Piper* leaves 783

L
Laennecia sophiifolia, diterpenes from 721
Laetia corymbulosa, cytotoxic clerodane diterpene esters from 233
Lamiaceae 241, 263, 353, 397, 927, 933
Lanostanes, from *Garcinia* pericarp 183
Ledol, from *Rencalmia*, stereochemistry of 749
Leucocoryne, alkenyl-L-cysteine sulfoxides, alliinase and aroma in 127
Lignans,
analgesic, from *Lychnospora* 809
cytotoxic, from *Taiwania* heartwood 227
dibenzocyclooctadiene, from *Magnolia* 653
nor-, antibacterial and antifungal, from *Styrax* 597
tetrahydrofuran, from *Piper* 843
Lignoids, effects of on hematophagous bug 611
Liliaceae 127
Limonoids, from *Trichilia* 711, 733
Linaceae 537
Linum flavum, dirigent-mediated podophyllotoxin biosynthesis in 537
Lonchocarpus latifolius, flavonoids from roots of 787
L. oaxacensis, flavanones from 953
Lonicera japonica, secoiridoid glycosides from 879
Lychnophora ericoides, analgesic activity of lignans form 809

M
Magnolia pyramidata, dibenzocyclooctadiene lignans from 653
Magnoliaceae 653
Malus, inhibition of 1-aminocyclopropane-1-carboxylic acid oxidase from 203
Marchantia polymorpha, secretion of 37-kDa peroxidase by 197
Maytenus aquifolium, compartmentalization of triterpenoid biosynthesis in 741
Medicago truncatula, peptides from cell walls of nodules or uninfected roots of 429
Megastigmane glycosides, from *Phlomis* 353
Meliaceae 711, 727, 733, 867
[D-Leu^1]Microcystin-LR, cyanobacterial toxin from *Microcystis* 383
Microcystis RST 9501, [D-Leu^1]microcystin-LR from 383
Mollinedia marliae, butanolide from 859
Monimiaceae 679, 859
Monoterpenes, antifungal, production of in elicited cultures of *Piqueria* 51
Moraceae 915
Myricaria germanica, long-chain alkanediols from 169
Myristicaceae 505, 589
distribution of flavonoids in 505
Myrtaceae, *C*-methyl flavonoids from leaf waxes of 965

N
Natural product drug discovery, developments in 463
Neolignans, from *Virola*, anti-leishmanial activity of 589
Neoraputia magnifica, enzyme-inhibiting pyrano chalcones and flavone from 643
Nerol, biotransformation of by *Aspergillus* and *Penicillium* 363
Nicotiana tabacum, 38 kDa allylic alcohol dehydrogenase from 297
Norlignan, from *Curculigo*, vascular acticity of 411

O
Oleaceae 275
Oleoresins, composition of in *Copaifera* 773
Onobrychis viciifolia, phenolic glycosides from 67
Oryza sativa, gibberellin biosynthesis in seedlings of 317
Oxanthrone *C*,*O*-diglycoside, from *Picramnia* 837

P
Paramignya griffithii, flavanones, triterpene and chromene from 269
Parthenium hysterophorus, sesquiterpene lactone variability in 769
Pectin esterase activity, in cold-stored peaches 55
Penicillium, biotransformation of geraniol, nerol and citral by 363
Peperomia pellucida, dimeric phenylethanoid from 779
Peptides, from cell walls of *Medicago* nodules or uninfected roots 429

Peroxidase, secreted from liverworts subjected to chemical stress 197
Phenolic glycosides,
from *Salvia* 263
from *Teucrium* 927
Phenylethanoid, dimeric, from *Peperomia* 779
Phenylpropanoids,
from *Piper* 843
in *Araucaria* at different stages of development 575
Phlomis aurea, iridoid and megastigmane glycosides from 353
Phytoalexins, from *Sinapis*, elicitation, isolation and synthesis of 213
Phytobusiness, requiring social chemistry 93
Phytolacca icosandra, molluscicidal saponins from 603
Phytolaccaceae 603
Picramnia teapensis, anthrone and oxanthrone *C,O*-diglycosides from 837
Piper, antifungal amides from 621
P. lhotzkyanum, *C*-glucosylflavone from 783
P. solmsianum, phenylpropanoids and tetrahydrofuran lignans from 843
Piperaceae 621, 779, 783, 843
Piqueria trinervia, production of antifungal monoterpenes in 51
Pisum sativum, ability of histone deacetylase inhibitors to alter cell proliferation in 11
Plantaginaceae 337
Plantago, chemotaxonomy of, using iridoid and caffeoyl phenylethanoid glycosides 337
Poaceae 1, 317, 375, 389
Podophyllotoxin biosynthesis, dirigent-mediated, in *Linum* and *Podophyllum* 537
Podophyllum peltatum, dirigent-mediated podophyllotoxin biosynthesis in 537
Polygala sabulosa, styrylpyrones and dihydrostyryl-2-pyrones from 819
Polygalaceae 819, 847
Polygalacturonase activity, in pectin fractions of cold-stored peaches 191
Polygonaceae 407
Polyphenol oxidase, from coffee leaves and fruit endosperm 285
Polyphenols, from grape seed, changes in during fruit ripening 77
Polysaccharides, from Vochysiaceae seed cell walls, monomer composition of 581
Potamogetonaceae 909
Proanthocyanidin, A-type, antioxidant, from *Dioclea* 805
Protein biochemistry,
allylic alcohol dehydrogenase, 38 kDa, from *Nicotiana* cultured cells 297
deacetyllipecoside synthase, from *Alangium* 177
desacetoxyvindolene 4-hydroxylase, cellular localization of, in *Catharanthus* 531
pectin esterase and polygalacturonase activities, in peach pectin 191
peroxidase, 37 kDa, secreted from liverworts in response to chemical stress 197
polyphenol oxidase, from coffee leaves and fruit endosperm 285
tryptophan decarboxylase, cellular localization of, in *Catharanthus* 531
Prunus persica, pectin esterase, polygalacturonase and gel formation in peach pectin 191
Psathyrella scobinacea, acetylenes and dichloroanisoles from 921
Pseudocalymma elegans, iridoid glycosides from 359

Q

Quillaja saponaria, triterpene saponins with new acyl components from 419

R

Racemosol, from *Bauhinia*, possible biosynthesis of 349
Renealmia chrysotrycha, stereochemistry of ledol from 749
Rheum palaestinum, anti-platelet aggregation active stilbenes from 407
Rhodnius prolixus, effects of lignoids on 611
Rosaceae 111, 191, 203, 419, 887
Rubiaceae 285
Rubus idaeus, epicuticular wax composition in flowers of 111
Ruppia maritima, antialgal *ent*-labdane diterpenes from 909
Rutaceae 269, 643, 675

S

Salacia campestris, compartmentalization of triterpenoid biosynthesis in 741
Salvia officinalis, flavonoid and phenolic glycosides from 263
Saponins,
steroidal,
aphid-repellent, from *Solanum* 217
from *Cestrum* leaves 715
triterpenoid,
from *Quillaja* 419
molluscicidal, from *Phytolacca* 603
Secoiridoid glycosides,
from *Fraxinus* 275
from *Lonicera* flower buds 879
Secoiridoids, allelopathic, from *Sphenoclea* 131
Senecio vulgaris, cloning and expression of homospermidine synthase from 305
Sesquiterpene biosynthesis, role of germacrene D as a precursor in 141
Sesquiterpene lactones,
antifungal, from *Centaurea* 903
from *Viguiera* 255
in *Parthenium*, variability of 769
Sesquiterpenoids,
antibacterial, from *Carissa* 403
cytotoxic, from *Taiwania* heartwood 227
from *Herbertus* 247
seco-prezizaane, from *Illicium* 883
Simaroubaceae 837
Sinalbins A and B, from *Sinapis* 213
Sinapis alba, elicitation, isolation and synthesis of phytoalexins from 213
Siparuna apiosyce, flavonol glycosides from 679
Snake venom neutralizing plant compounds, micromolecular nature of 627
Solanaceae 217, 297, 715
Solanum laxum, aphid repellent spirostane saponin from 217
Solidago, germacrene D from, as a precursor in sesquiterpene biosynthesis 141
Sphenoclea zeylanica, allelopathic sulphur compounds and secoiridoids from 131
Sphenocleaceae 131
Spinacia oleracea, effect of triacontanol on lipid peroxidation in 59
Spirobisnaphthalenes, from fungi, biosynthesis of 311
Stachybotrys chartarum, atranones and diterpenes from 663
Sterols, from *Cipadessa* 867
Stilbenes, anti-platelet, from *Rheum* aerial parts 407
Styracaceae 597
Styrax ferrugineus, antibacterial and antifungal *nor*-lignans from 597
Styrylpyrones, form *Polygala* 819
Sulphoxides, in *Leucocoryne* 127
Sulphur compounds, allelopathic, from *Sphenoclea* 131

T

Taiwania cryptomerioides, cytotoxic lignans and sesquiterpenoids from 227
Tamaricaceae 169
Tannins, hydrolyzable, oxidative transformations of and plant evolution 513
Taxodiaceae 227
Tephrosia tunicata, *C*-prenylflavonoids from 799
Terpenoids, from *Guarea* leaves 727
Tetraflavonoid, from *Aristolochia* 823
Teucrium pilosum, decarboxyrosmarinic acid and its glycoside from 927
T. pumilum, chemotaxonomic value of essential oils in 397
Theobromine, from *Ilex* epicuticular wax 853

Thymus caespititius, chemical polymorphism of essential oils from 241
Tovomita brasiliensis, dichromenoxanthones from 815
Triacontanol, inhibition of enzymatic and non-enzymatic lipid peroxidation by 59
Trichilia elegans,7β-oxygenated limonoids from 733
T. estipulata, limonoid from 711
Triterpenoids,
friedelane and quinonemethide, biosynthesis of in *Maytenus* and *Salacia* 741
from *Garcinia* pericarp 183
from *Paramignya* stems 269
tetranor-, from *Cipadessa* 867
Triticum aestivum, biotransformation of essential oils by germinating seeds of 375
Tuber borchii, volatiles from 983

V
Veratrum viride, transformation of jervine from, by *Cunninghamella* 19
Verbenaceae 873
Viguiera, sesquiterpene lactones from 255
Vindolene biosynthesis, role of light in activating late stages of 531
Virola, antileishmanial activity of neolignans from 589
Vitaceae 77
Vitex trifolia, diterpenoids from 873
Vitis vinifera, changes in seed polyphenols during fruit ripening of 77
Vochysiaceae, monomer composition of seed cell wall polysaccharides from 581
Volatiles, from *Tuber* mycelium 983

W
Waxes, epicuticular, composition of in raspberry and hawthorn flowers 111

X
Xanthones,
from *Calophyllum* 833
pentaoxygenated, from *Bredemeyera* 847
tetraoxygenated, distribution, bioactivity and biosynthesis of 683
Xylindein, from *Chlorociboria*, absolute configuration of 237

Z
Zataria multiflora, aromatics from 933
Zingiberaceae 749

PHYTOCHEMISTRY

AIMS AND SCOPE

Phytochemistry is the international journal of plant chemistry, plant biochemistry and molecular biology, published 24 times per annum by Elsevier Science. The majority of these publications will be *Regular Issues* covering research on all aspects of pure and applied plant biochemistry, especially that which leads to a deeper understanding of the factors underlying the growth, development and metabolism of plants and the chemistry of plant constituents. *Phytochemistry* is a primary source for papers dealing with plant secondary compounds, especially with regard to their biosynthesis and diverse properties. This specialisation is reflected further in *Special Issues* (Reports on Structure Elucidation) devoted exclusively to structure elucidation of phytochemicals which will now be published 5–6 times per annum. *Phytochemistry* is the official organ of 'The Phytochemical Society of Europe' and 'The Phytochemical Society of North America'. The Journal is currently divided into several sections as indicated below, but papers which cut across these sections or which are on any other aspect of plant biochemistry will also be considered.

Editorial Comment will be an occasional series where Regional Editors, Board Members or other scientists will be invited to comment on phytochemistry topics of global interest and debate.

Molecules of Interest will consist of invited short reviews (two printed pages) of individual compounds or macromolecules of plant, fungal or algal origin, which are currently attracting significant applied, commercial or biological interest. These can be novel compounds or newly discovered properties of familiar compounds.

Review Articles are published at regular intervals, ranging in scope from primary metabolism and regulation of plant growth, through plant enzymology to natural product chemistry and the biological activity of plant products. They deal with significant new areas of research and are intended to command the interest of the general reader. Authors should consult the Editors before preparing such articles, by submitting an outline of their proposed review.

The *Protein Biochemistry* section will contain reports on the purification of proteins directly from the organism or by heterologous expression. These will preferentially include information on enzymological properties, macromolecular structure and exploration of function, by site-directed mutagenesis and/or subcellular localisation. Reports of work which employ proteomics will be particularly welcome and are intended to complement the next section.

The *Molecular Genetics and Genomics* section contains papers on nucleic acid biochemistry, function and expression. This section will contain reports of genes and their analysis and expression, which demonstrate novelty and/or biological significance. Papers and communications which contain only sequence data or which duplicate studies of gene expression in other species will not generally be acceptable. Gene discovery using mutants and reverse genetics or exploration of functionality of genes in transgenic organisms will however be encouraged, if this provides new insight into unknown or previously known sequences.

The *Metabolism* section focuses on work in primary, intermediary and secondary metabolism. Contributions are particularly encouraged on the biosynthesis of macromolecules such as polysaccharides, lipids and other polymers such as lignin and their assembly in higher orders of structure such as membranes and cell walls. This section will also contain papers describing the further elucidation of known pathways and of newly discovered alternatives, as well as all aspects of metabolic regulation including regulatory molecules and proteins such as protein kinases and transcription factors. Studies directed toward understanding the regulation and possible cross-talk between pathways through the use of transgenic organisms are also strongly encouraged, as are those describing aspects of biochemistry regulated during growth and development at any stage of the organism.

The *Ecological Biochemistry* section contains papers on biochemical adaptations in plants to environmental stress; pollination biochemistry; plant toxins and their effects on animals, phytoecdysones, antifeedants; herbivory, plant defence and insect feeding preferences; utilization of plant substances by animals; and all aspects of biochemical plant pathology, including the production of phytotoxins and phytoalexin elicitation. Contributions on various symbiotic interactions are also welcomed. Also of considerable interest is the elucidation of the signalling molecules that govern the nature of the responses involved in the interaction between two or more organisms.

The *Chemotaxonomy* section contains papers on the comparative biochemistry of plants. These may range from distributional studies on low molecular weight compounds in a group of fungi, algae or higher plants to the comparative amino acid sequences of related proteins within groups of species. Papers on infraspecific chemical variation are also included here.

The *Bioactive Products* section contains papers on novel plant chemistry, where the biological activities of one or more of the new plant compounds are described. Descriptions of possible pharmacological, medical or therapeutic use or of dietary significance are encouraged if known. This section may also contain analysis of genetically modified plants that have been analysed for changes in their profiles of bioactive plant products. Such bioassay data should include comparable results for a known agent, so that the reader can judge the relative importance of any new finding. Full experimental details of the biological tests should be provided, and studies judged significant by the Editors may be invited to be discussed in the *Molecules of Interest* section before publication. In such cases, this review will appear in the same issue as the publication.

The *Chemistry* section contains papers on: growth substances, macromolecules, primary metabolites, terpenoids, polyketides, phenylpropanoids, flavonoids, alkaloids and compounds of mixed biosynthetic origin. Authors investigating the chemistry of a given plant species should aim to publish their results in a single manuscript rather than in a series of papers which describe each new compound as it is found. The structural analysis of new plant substances is now so routine that papers reporting a single novel compound of expectable structure (e.g. a new triterpene fatty acid ester) are rarely acceptable, unless other novel information on the plant is included.

Accelerated Publications are published at regular intervals. Papers appearing under this heading will have received fast publication due to their particular significance. Authors are encouraged to provide strong justification as to why papers should be considered in this category.

Book Reviews are published regularly and the journal welcomes the submission of new books for review, to the U.K. office. Symposia and Society announcements will be published, at the discretion of the Editors. Preliminary communications will not, however, be considered.

Authors should consult the latest instructions to authors see *Phytochemistry* (Volume 56, Issue 1) before preparing their manuscripts. All contributions must be in English and should be submitted to the appropriate Regional Editor for their geographical region. For U.K., Africa, The Commonwealth & Rest of the World: Professor G. P. Bolwell, Division of Biochemistry, School of Biological Sciences, Royal Holloway, University of London, Egham, Surrey, TW20 0EX, U.K. For the Americas and East Asia: Professor N. G. Lewis, Institute of Biological Chemistry, Washington State University, Pullman, WA 99164-6340, U.S.A. For Continental Europe and Russia: Professor D. Strack, Institut für Pflanzenbiochemie, Weinberg 3, D-06120 Halle (Saale), Germany.

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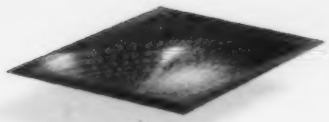

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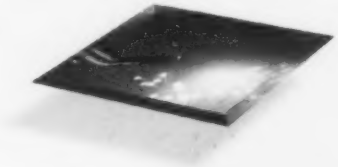

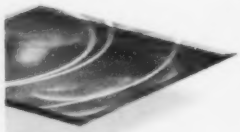

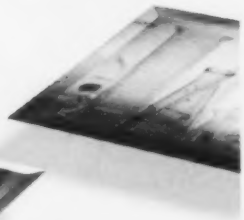

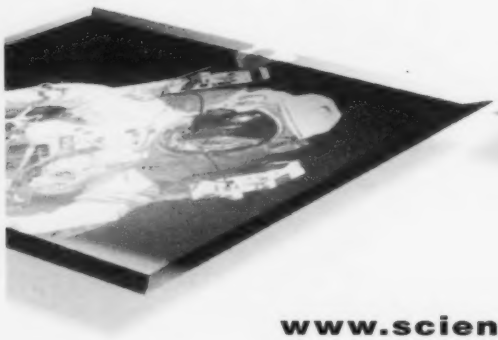

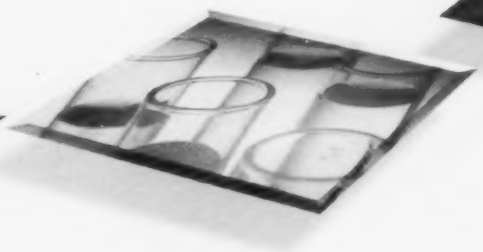

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